

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	Confirmation No.: 3199
	)	
Joshua Gee-Yuen MAHOWALD et al.)	)	Group Art Unit: 2626
	)	
Serial Number: 10/058,175	)	Examiner: Brian L. Albertalli
	)	
Filed: January 29, 2002	)	
	)	
Attorney Docket No. 53470.009005	)	
	)	
	)	
For: SYSTEM AND METHOD FOR	)	
INTERACTIVE VOICE SERVICES	)	
USING MARKUP LANGUAGE	)	
WITH N-BEST FILTER ELEMENT	)	
	)	

**APPEAL BRIEF**

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**APPEAL BRIEF**

In response to the Office Action dated October 19, 2006, finally rejecting pending claims 1-18, appellants respectfully request that the Board of Patent Appeals and Interferences reconsider and withdraw the rejections of record, and allow the pending claims, which are attached hereto as an Appendix A.

**I. REAL PARTY IN INTEREST**

The real party in interest is Microstrategy, Inc., the assignee of the above-referenced application.

**II. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences.

**III. STATUS OF CLAIMS**

Claims 1-18 are pending in this application. The rejection of claims 1-18 is appealed.

#### **IV. STATUS OF AMENDMENTS**

No amendments to the claims have been filed subsequent to the Office Action dated October 19, 2006.

#### **V. SUMMARY OF INVENTION**

Appellants believe that a brief discussion of the background technology, followed by a brief summary of the embodiments of the invention and the problems solved by the embodiments of the present invention, will assist the Board of Patent Appeals and Interferences (hereinafter referred to as “the Board”) in appreciating the significant advances made by the embodiments of the present invention. Finally, concise explanations of each of the independent claims are provided, including reference to exemplary portions of the specification and figures.

##### **A. The Background**

Markup languages including eXtensible Markup Language (XML) are known. XML is referred to as extensible because it does not have a fixed form like some other markup languages, e.g., HTML. XML comprises a set of rules that determine how to compose other markup languages.

A document that conforms to XML rules is an XML document. XML documents follow a tree structure that comprises of a set of hierarchically arranged nodes including a single top level node that contains all other nodes. Each node is marked by tags of the form `<node> node body </node>`. If a node does not have a body, it may also be written as `<node/>`. A node may have one or more attributes: `<node attr1=“first attribute” attr2=“second attribute”/>`. Attributes are enclosed in quotes and preferably do not contain certain characters such as quotes, “<”, “>” and “&”.

The Extensible Stylesheet Language (XSL) is a language used to write stylesheets that

can transform XML documents into other XML documents or into plain text.- An XSL processor provides a mechanism for navigating through the nodes of an XML document and for applying certain transformations to them. These transformations are specified in a markup language that adheres to the XML syntax. XSL can be applied to any kind of XML-based markup, even to XSL itself. XSL also enables the use of scripts. Scripts are programs that can provide additional functionality that may not be possible with the standard XSL elements.

Recently markup languages have been adapted to enable systems to communicate using voice enabled devices. In such systems, the markup language may provide a call structure to a dialog between a user and the automated voice information delivery system. The elements of the markup language provide the structure and content for a meaningful dialog. In many such systems, however, the responses by the user are only enabled through manually activated inputs on a user's terminal device, such as a keypad of a telephone. Many users prefer to interact with a telephone device via voice commands, particularly in view of the trend in the law towards "hands-free" mobile telephony devices.

Interpreting voice responses is a challenge for voice-based technology due to different inflections, tones, accents, speech patterns, volumes and many other speech variables. Most voice-based systems limit responses to select choices (e.g., say "one" for one, "two" for two, etc.). These systems do not provide for free-flowing logic. Moreover, in such systems, the manner of interpreting voice commands is often coded into the system without much flexibility.

#### **B. The Embodiments of The Present Invention**

Accordingly a need has arisen for a voice-enabled markup language system with the ability to enable a programmer to include an N-best filter element that generates unverified possible matches to the utterance for verification to the user. Specifically, this element may be

used as part of a markup language for use in interactive voice broadcasting to enable verification of difficult-to-interpret utterances. Such an element is particularly useful in situations in which a large number of possible utterances may be made in response to an input request or similarly-sounding utterances are possible. For example, a user may be creating a voice page that enables a user to request a current stock quote. Given the audible similarity of some stock quotes (e.g., BMT and VMT) and the large number of such quotes, a speech recognition system may have difficulty understanding the quote desired. Similarly, when asking for a person's name, many similarly-sounding names may be returned such as Don, John, Ron, Lon, Fawn, and Dawn, for example.

Accordingly, through the n-best filter element, the creator of such a page may specify the use of the n-best filter a list of designated variables to confirm the utterance (e.g., "Did you want 'BMT'?"). From a grammar file used to interpret voice commands, the speech recognition system may generate a list of possible corresponding matches to the utterance. That list may then be output to the user until a verification has been received. If the list returned BMT and VMT, the system would ask, "Did you want BMT? and if not, then "Did you want VMT?". If none of the possible matches is verified, an error may be generated by the N-best filter element (e.g., We are unable to understand your request) to enable the user to try to recite the choice more clearly.

The N-best filter element may be incorporated as an element in an XML based language. For purposes of explanation, it will be described in the context of a markup language referenced throughout this application as TML, but it should be appreciated that this n-best filter element may be provided in an XML-based language and in particular, for use in one for voice-based applications.

According to one embodiment, TML is based on XML and comprises a set of elements that are used to define functions for various portions of a document and a set of tags that correspond to the elements. The tags are used to delimit portions of a document that belong to a particular element.

According to one embodiment, TML comprises a HEADER Element, a CONTAINER Element, a DIALOG Element, a SPEECH Element, a SOUND Element, a FOR-EACH Element, an INPUT Element, an OPTION Element, a GET-NUMBER Element, a GET-SPEECH Element, an ERROR Element, a SYS-ERROR Element, a RECORD Element, a COMMIT Element, a WAIT Element, and a N-BEST-FILTER Element.

A HEADER Element is used to identify the markup language on which a document is based. A CONTAINER Element is used to identify a document as a TML document. A DIALOG Element is the basic unit of interaction between a system and a user. According to one embodiment, a DIALOG Element may contain text that is to be spoken to a user. A DIALOG Element may contain SPEECH Elements, SOUND Elements, INPUT Elements, FOR-EACH Elements and SYS-ERROR Elements.

A SPEECH Element defines text portions of a document. According to one embodiment, text portions of a document are used to specify information that is to be spoken to a user. A SOUND Element is used to define an audio file to be played to a user. According to one embodiment, the SOUND Element compliments the SPEECH Element and is used to present content that is known in advance of an interactive voice broadcast. A FOR-EACH Element is used to cycle (loop) through a group of related variables; to dynamically generate speech from data. An INPUT Element defines sections of DIALOG Elements that contain interactive portions of the TML document. According to one embodiment, an INPUT Element contains

elements that pertain to a response expected from a user.

An OPTION Element identifies a predefined user selection that is associated with a particular input. According to one embodiment, OPTION Elements are used to associate one or more choices available to a user with telephone keys.

GET-NUMBER and GET-SPEECH Elements define a particular input that is expected from a user. According to one embodiment, a GET-NUMBER Element defines that a sequence or number of key presses from a telephone keypad is expected as input. The sequence may comprise a fixed-length, a variable length or a PIN code. Unlike an OPTION Element, a GET-NUMBER Element is not associated with predefined user selections. According to another embodiment, a GET-SPEECH Element defines that spoken response is expected from a user.

An ERROR Element defines a response to invalid input by a user. For example, an ERROR Element may be used to define the response to entry of an undefined option.

A SYS-ERROR Element defines a response to predetermined system events. For example, a SYS-ERROR Element may be used to define the response to expiration of the waiting time for a user input.

A RECORD Element enables a user to record speech or other sounds. According to one embodiment, the RECORD Element is used to record a message for another user, or to archive a speech exemplar for recognition purposes.

A COMMIT Element enables a temporary sound file, *e.g.*, one recorded using the RECORD Element, to be stored to a permanent address. According to one embodiment, the COMMIT Element is used to archive a sound file, *e.g.*, for later used for recognition purposes.

A WAIT Element is used to provide a period of time during which no interaction between user and system is expected, *e.g.*, when a database query is being run. According to one



embodiment, the WAIT Element enables audio such as music, to be played during the waiting period.

Again, the N-BEST-FILTER Element is used in conjunction with speech recognition and enables an utterance that was not understood initially to be confirmed. According to one embodiment, the N-BEST-FILTER Element is used to individually query a user with a list of designated variables in order to confirm the user's utterance.

A TRANSFER-CALL Element enables a call to be transferred to another telephone number for service. According to one embodiment, the TRANSFER-CALL Element is used to transfer a call to another number while keeping the original line open for further processing. Alternatively, the TRANSFER-CALL Element is used to transfer a call to another number and terminate the original connection.

Within any given document, TML uses a set of corresponding tags to delimit each of the above defined elements. These elements may be collected to generate a TML document according to another embodiment, of the present invention. Within a document, the boundaries of an element are delimited by its corresponding tags. Moreover, according to one embodiment, elements are arranged as parent elements and child elements. Parent elements may contain text and other elements. If an element is contained by another element, it may be called a child of the containing element.

According to another embodiment of the present invention, a TML document is used to provide interactive, dynamic voice services to a user through a telephone or other voice-enabled terminal device. A TML document enables a user to receive dynamically generated information and provide various types of input in response. According to one embodiment, the TML elements and tags described above are used to specify text that is to be communicated to a user

and to request input from a user. According to this embodiment, the specified text is passed through a text-to-speech converter and conveyed to a user over a telephone.

According to one embodiment, DIALOG elements identify the portions of the TML document that communicate with a user. Within a DIALOG element, SPEECH Elements and FOR-EACH Elements define text that is to be read to a user. SOUND Elements define prerecorded content that is played to a user. INPUT Elements identify the portion of a DIALOG Element that are interactive with a user. Within an INPUT Element, OPTION Elements, GET-NUMBER Elements and GET-SPEECH Elements may define text to be read to a user, but they also request input from a user. According to one embodiment, one or more OPTION Elements may include text that requests that a user choose one or more items from a list of choices defined by the OPTION Elements using the telephone keypad. According to another embodiment, GET-NUMBER and GET-SPEECH Elements may include text that requests free-form input from a user, e.g., by entering alpha-numeric characters using the telephone keypad or by speaking input.

The TML document may comprise ERROR elements and SYS-ERROR Elements. According to one embodiment, an ERROR element includes text that notifies a user of an invalid input. The SYS-ERROR element may also include text that notifies a user that the system has experienced an undefined event, e.g., a non-response to an INPUT Element.

These TML documents incorporating the n-best filter element may be used for many applications. One such application is a system and method for creation and automatic deployment of personalized, dynamic and interactive voice services, including information derived from on-line analytical processing (OLAP) systems and other data repositories. The system and method enables the ability to capture user selections to facilitate closed-loop transaction processing and processing of other requests. One aspect of the invention relates to an

interactive voice broadcasting (IVB) system and method that enables analytical reporting and advanced transactional services via the telephone or other voice-enabled terminal device. One advantage of the invention is that a voice service may leverage the power of OLAP or other data repository systems and provide critical information to the user, in a timely fashion, by phone. Another advantage of this method and system is that it provides a user with the opportunity to immediately act upon information received during a interactive voice broadcast.

A voice service is created and can have many users subscribed to the voice service. Each user can specify personal preferences for the content and presentation of the contents for a voice service. The specification of the elements of a voice service may be done using a set of interfaces (such as GUIs) that take the form of a voice service wizard.

A voice service comprises a collection of the elements discussed above. The collection of elements may present information to a user and may enable a user to request a transaction, a service or other service during an IVB. The term transactions, services and requests are to be interpreted broadly.

According to one embodiment, the user's responses to INPUT elements are stored during an IVB and, during or after the IVB, the stored information is processed by the system or is passed to another system or application for processing. The transaction (or other request) processing can be accomplished either in real-time, during the IVB, or after the IVB is completed. The results or confirmation of a transaction or other request can be provided to the user during the call or subsequently.

Once a voice service is created, the system monitors predetermined conditions to determine when the voice service should be executed. Each voice service is executed when one or more predetermined conditions are met as specified during creation of the voice service. For

example, a voice service may be executed according to a predetermined schedule (time-based) or based on a triggering event (*e.g.*, one or more conditions are met based on the output of an OLAP or other report).

When the predetermined condition is satisfied, the voice service is executed. Executing a voice service, includes the steps of generating the content specified by the voice service and the user preferences. Some users may have identical personalization options and, thus, a single call structure may be generated for a group of users with identical personalization options. The content of the voice service includes the information that is to be delivered to users of that voice service, and the input to be requested from the user, among other things. The content may include, for example, static text messages, dynamic content (*e.g.*, text based on information output from an OLAP report (or other data source), blended text (*e.g.*, static text combined with dynamic content) and prerecorded sound files.

This and other content along with a user's personalization preferences are formatted in an Active Voice Page (AVP). An AVP contains the call structure and data, voice style parameters for the user and personal identification information designated for the user. The AVP contains data at various hierarchical levels that are defined by the DIALOG elements defined for each voice service. The active voice pages are used to help govern the interaction between the call server and the user during an IVB. According to one embodiment, the content is formatted, into an AVP using XSL stylesheets so the AVP is in an XML-based language. According to one embodiment, the XML-based language used is a novel language referred to as TML (discussed below). Other XML-based markups could be used, such as VoiceXML™. The AVP is sent to a call server along with style properties for each user. The style properties of a user help determine the behavior of the call server during an IVB. A unique AVP is generated for each

user scheduled to receive a voice service.

When a user is called by the call server, information is passed through a text-to-speech (T-T-S) engine and delivered to the user through a voice-enabled terminal device. Preferably, the structure of each call is dynamic, driven by current data values and is personalized based on a user profile established during subscription to a voice service. During a typical IVB, a synthesized, natural sounding voice or a prerecorded voice greets the recipient by name, and identifies itself, then the synthesized voice provides dynamic information relevant to the user and enables a user to provide input back to the system.

An IVB is a voice-enabled interaction with a user having a dynamic structure controlled by the AVP for the particular user. The IVB may be delivered using real-time, on-the-fly speech generation. During an IVB, information is exchanged between the call server and a user according to the AVP. The system executes dialogs by reading messages to the user and, eliciting input from the user. For example, the user may press buttons on a telephone touch pad dial to select an option or to provide numeric or alphanumeric input or the user may speak a response which the system resolves using speech recognition technology. Each response provided by a user may transfer control of the IVB to a different part of the AVP or to a different AVP.

During or after the IVB, the user's responses may be processed by the system or other applications. The AVP may contain pointers to other applications and embedded statements such that when a user exercises an option or otherwise supplies input, the system performs a requested operation and returns the results to the user during the IVB. For example, using various input functionality, a user may request that a real-time database query be performed. When the user provides such input, control is shifted to a portion of the AVP that contains an

embedded SQL statement that is made against a database.

When a user has worked through selected dialogs of the AVP, the IVB is terminated. That is, a user likely will not work through all of the available dialogs during an IVB. Rather, the user's inputs determine which available dialogs are encountered during any given IVB.

**C. Explanation of Independent Claim 1**

A computer-readable storage medium comprising code programmed in a markup language for facilitating voice-enabled communication between a voice service system and an individual (Page 14, lines 4-15), the markup language comprising:

a hierarchical set of functional elements that define the capabilities of the markup language (Page 14, line 16 to Page 15, line 9), the set of elements comprising:

a dialog element that defines a unit of interaction between the voice service system and an individual (Page 22, line 10 to Page 23, line 19);

an input element contained in the dialog element and operative to request input from an individual during execution of a voice service (Page 30, line 4 to Page 36, line 3); and

an n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response (Page 50, line 14 to Page 53, line 1);

whereby one or more of the elements are arranged to define a voice service (Page 14, lines 16-20).

**D. Explanation of Dependent Claim 3**

The markup language of claim 1, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance. (Page 51, lines 1-9).

**E. Explanation of Independent Claim 7**

An active voice page in a computer-readable storage medium for use in an interactive voice output (Page 14, lines 4-11) comprising:

at least one dialog element contained within the container element, the dialog element comprising content for delivery to an identified user during an interactive voice broadcast (Page 22, line 10 to Page 23, line 19);

at least one input element contained within the at least one dialog element, the at least one input element defining input to be received from the identified user during the interactive voice broadcast (Page 30, line 4 to Page 36, line 3); and

at least one n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response (Page 50, line 14 to Page 53, line 1).

**F. Explanation of Dependent Claim 9**

The active voice page of claim 7, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance (Page 51, lines 1-9).

**G. Explanation of Independent Claim 13**

An interactive voice output system that dialogs with a user (Pages 14, lines 4-11) comprising:

a XML-based page (Figure 9, Page 75, lines 11-17) comprising:

at least one dialog element contained within a container element, the dialog element comprising content for delivery to an identified user during an interactive voice broadcast (Page 22, line 10 to Page 23, line 19);

at least one input element contained within the at least one dialog element, the at

least one input element defining input to be received from the identified user during the interactive voice broadcast; and

at least one n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response (Page 30, line 4 to Page 36, line 3); and

a call server that engages a user in dialog based on the dialog element, receives input from a user and prompts the user to verify possible matches for audibly-uttered user responses that are not understood based on the XML-based page contents (Figure 3A, Page 24, line 16 to Page 26, line 3).

#### **H. Explanation of Dependent Claim 15**

The interactive voice output system of claim 13, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance. (Page 51, Lines 1-9).

### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The issues on appeal are whether the following rejections are proper: (1) The rejection of Claims 1-12 under 35 U.S.C. §101 because the claimed invention is directed to a non-statutory subject matter (2) The rejection of Claims 1 and 7 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement (3) The rejection of Claims 1-7 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention (4) The rejection of Claims 1-5 and 7-12 under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith (5) The rejection of Claims 6 and 12 under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith further in view of Applicant's



Admitted Prior Art (6) The rejection of Claims 13-17 under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith further in view of U.S. Patent No. 6,269,336 to Ladd and (7) The rejection of Claim 18 under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith further in view of Applicant's Admitted Prior Art.

## **VII. ARGUMENT**

### **A. The Rejection of Claims 1-12 Under 35 U.S.C. §101 is Improper**

On Page 5 of the Office Action Claims 1-12 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Appellants respectfully traverse this rejection.

Claim 1 recites “a computer-readable storage medium comprising code programmed in a markup language for facilitating voice-enabled communication between a voice service system and an individual.” The Examiner maintains the rejection although the Applicant has amended claim 1 according to the suggestion of the Examiner by incorporating a “computer-readable storage medium comprising code program.” The Examiner further alleges that the claimed “markup language” comprises a plurality of “elements” and these elements do not define a series of acts to be performed, the Applicant respectfully disagree. Claim 1 clearly includes limitation of “whereby one or more of the elements are arranged to define a voice service,” therefore the plurality of elements in claim 1 define a series of acts to perform a “process” of voice service. Furthermore, while the Office Action suggests using “encoded” rather than “comprising,” Applicants respectfully submit that the claims are adequately directed to patentable subject matter in their present form. Accordingly, claim 1 is directed to a statutory subject matter and

for at least the above reasons Appellant respectfully requests that the rejection under 35 U.S.C. §101 of Claims 1-6 be withdrawn.

Claim 7 recites “an active voice page in a computer-readable storage medium for use in an interactive voice output.” The Examiner maintains the rejection although the Applicant has amended claim 7 according to the suggestion of the Examiner by incorporating a “computer-readable storage medium comprising code program.” The Examiner further alleges that the claimed “markup language” comprises a plurality of “elements” and these elements do not define a series of acts to be performed, the Applicant respectfully disagree. Claim 7 clearly includes limitation of “an active voice page in a computer-readable storage medium for use in an interactive voice output,” therefore the plurality of elements in claim 7 define a series of acts to perform a “process” of an interactive voice output. Furthermore, while the Office Action suggests using “encoded” rather than “comprising,” Applicants respectfully submit that the claims are adequately directed to patentable subject matter in their present form. Accordingly, claim 7 is directed to a statutory subject matter and for at least the above reasons Appellant respectfully requests that the rejection under 35 U.S.C. §101 of Claims 7-12 be withdrawn.

**B. The Rejection of Claims 1 and 7 Under 35 U.S.C. §112, first paragraph, is Improper**

“In order to satisfy the written description requirement, the disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue.” Purdue Pharma L.P. v. Faulding, Inc., 230 F.3d 1320, 1323, 56 USPQ2d 1481, 1483 (Fed. Cir. 2000). In other words, as stated in MPEP § 2163.02, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or in *haec verba*) in order for the disclosure to satisfy the description requirement. In this

case, one skilled in the art at the time of the application was filed would clearly understand that a markup language for facilitating voice-enabled communication may be used in a tangible “computer-readable storage medium.” Furthermore, the specification clearly recites that markup language can be “adapted to enable systems to communicate” (page 2), where such systems include various types of computer servers, such as call servers, web servers, voice service servers, remote servers, etc. Therefore, the rejections of claims under §112, first paragraphs are improper and should be withdrawn.

**C. The Rejection of Claims 1-7 Under 35 U.S.C. §112, second paragraph, is Improper**

As stated in MPEP §2173.04, breadth of a claim is not to be equated with indefiniteness. In re Miller, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph. Accordingly, the Applicant has clearly set forth the metes and bounds of the claim.

“In order to satisfy the written description requirement, the disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue.” Purdue Pharma L.P. v. Faulding, Inc., 230 F.3d 1320, 1323, 56 USPQ2d 1481, 1483 (Fed. Cir. 2000). In other words, as stated in MPEP § 2163.02, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed. The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. In this case, one skilled in the art at the time of the application was filed would clearly understand that a markup language for facilitating voice-enabled communication may be used in a tangible

“computer-readable storage medium.” Furthermore, the specification clearly recites that markup language can be “adapted to enable systems to communicate” (page 2), where such systems include various types of computer servers, such as call servers, web servers, voice service servers, remote servers, etc. Accordingly the metes and bounds of the claimed computer readable storage medium may be readily discernable to those skilled in the art at the time the application was filed. Therefore, the rejections of claims under §112, second paragraphs are improper and should be withdrawn.

**D. The Rejection of Claims 1-5 and 7-11 Under 35 U.S.C. §103(a) is Improper**

On Page 7 of the Office Action Claims 1-5 and 7-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith et al. Applicant respectfully traverse this rejection.

In claim 1, the Office continues to misapply its obligation to provide motivation to combine references despite Applicants clearly indicating its deficiencies. Specifically, the Office Action dated October 19, 2006, fails to set forth a proper *prima facie* case of obviousness.

As stated in MPEP § 2143, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Also, as stated in MPEP § 2143.01, obviousness can only be established by combining or

modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, as stated in MPEP § 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). That is, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970).

The Office Action fails in all of the above rejections to set forth a proper *prima facie* case of obviousness.

First, while the Office recognizes that the Motorola reference does not disclose or suggest an n-best list filter element in an XML-based language structure as recited in the claims, it presumes that Beith remedies this deficiency because it alleges “a method for requesting verification from a list of possible matches for an audibly-uttered user response”. See Office Action at p. 8. However, Applicants respectfully submit that **Beith does not disclose, suggest, or even contemplate “an n-best list filter element”**. The mere disclosure of a method for requesting verification from a list is not the same as an n-best list filter element recited in the claims. Accordingly, Applicants respectfully submit that not all of the claimed limitations are taught in the references.

Second, the PTO asserts that modifying the Motorola reference to include the n-best list filter feature would have been obvious “because such feedback greatly improves the accuracy and increases the user confidence in the system.” *See* Office Action at p. 8. However, such a statement represents classic **impermissible hindsight**. The Office Action fails to provide any **evidence** as to why one of ordinary skill in the art would choose to implement the n-best list element in the way claimed. Instead, the Examiner relies on his own hindsight conjecture. Apparently, the Office Action’s statement that it would greatly improve accuracy and increase user confidence in the system is wholly unsupported by Motorola or Beith. Although the Office attempts to use the Balentine reference as a source of motivation to combine Motorola and Beith, the reference was clearly “not relied upon” by the Office. As a result, none of the references specifically cited in the Office’s rejection states anywhere that there is an advantage in adding an element in the XML-based language.

1. Claim 2 is Separately Patentable

Claim 2 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element operates to cause processing system to generate a list of possible matches for a received audible utterance*. The Office Action’s rejection of this claim is improper for the reasons set forth above with respect to claim 1. Motorola in view of Beith fails to show each and every limitation of claim 2. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 2 be withdrawn.

2. Claim 3 is Separately Patentable

Claims 3 is separately patentable because there is no disclosure that the “*n-best filter*

*element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance*". The Examiner erroneously presumes that the Beith reference "must necessarily store the results that are confirmed as not matching the utterance so that each possible recognition candidate is only presented one time to the user," specifically on page 9 of the Office Action dated October 19, 2006. The Beith reference merely teaches in Figure 7B, step 344 that VR checks to see if all matches have been queried and if all matches have not been queried, the VR will retrieve the next best match. *See* column 10, lines 5-11. Nowhere does the Beith reference teach or suggest a namespace attribute that stores results from a grammar that are not confirmed as not matching the utterance. In addition, the Beith reference teaches away from the erroneous presumption alleged by the Examiner by sequentially prompting the next best name match therefore the Beith reference does not need to store the result from a grammar that are not confirmed as not matching the utterance. Moreover, the Beith reference does not teach the necessity of storing the results from a grammar that are confirmed as not matching the utterance, it may simply discard the results from a grammar that are confirmed as not matching the utterance. Therefore, the presumption made by the Examiner that the Beith reference must necessarily store the results that are confirmed as not matching the utterance is erroneous and baseless. Accordingly, the rejection of claim 3 is improper for the reasons set forth above and there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 3 be withdrawn.

3. Claim 4 is Separately Patentable

Claim 4 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element comprises an expression attribute that specifies a portion on an input element*

*to be confirmed with the user.* The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Motorola in view of Beith fails to show each and every limitation of claim 4. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 4 be withdrawn.

4. Claim 5 is Separately Patentable

Claim 5 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element specifies a loop to go through the list of possible matches for the utterance.* The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 1. Motorola in view of Beith fails to show each and every limitation of claim 5. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 5 be withdrawn.

5. Claim 7 is Separately Patentable

The Office continues to misapply its obligation to provide motivation to combine references despite Applicants clearly indicating its deficiencies. Specifically, the Office Action dated October 19, 2006, fails to set forth a proper *prima facie* case of obviousness.

As stated in MPEP § 2143, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation



of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Also, as stated in MPEP § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, as stated in MPEP § 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). That is, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970).

The Office Action fails in all of the above rejections to set forth a proper *prima facie* case of obviousness.

First, while the Office recognizes that the Motorola reference does not disclose or suggest an n-best list filter element in an XML-based language structure as recited in the claims, it presumes that Beith remedies this deficiency because it alleges "a method for requesting verification from a list of possible matches for an audibly-uttered user response". See Office

Action at p. 8. However, Applicants respectfully submit that **Beith does not disclose, suggest, or even contemplate “an n-best list filter element”**. The mere disclosure of a method for requesting verification from a list is not the same as an n-best list filter element recited in the claims. Accordingly, Applicants respectfully submit that not all of the claimed limitations are taught in the references.

Second, the PTO asserts that modifying the Motorola reference to include the n-best list filter feature would have been obvious “because such feedback greatly improves the accuracy and increases the user confidence in the system.” *See* Office Action at p. 8. However, such a statement represents classic **impermissible hindsight**. The Office Action fails to provide any ***evidence*** as to why one of ordinary skill in the art would choose to implement the n-best list element in the way claimed. Instead, the Examiner relies on his own hindsight conjecture. Apparently, the Office Action’s statement that it would greatly improve accuracy and increase user confidence in the system is wholly unsupported by Motorola or Beith. Although the Office attempts to use the Balentine reference as a source of motivation to combine Motorola and Beith, the reference was clearly “not relied upon” by the Office. As a result, none of the references specifically cited in the Office’s rejection states anywhere that there is an advantage in adding an element in the XML-based language.

6. Claim 8 is Separately Patentable

Claim 8 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element operates to cause processing system to generate a list of possible matches for a received audible utterance*. The Office Action’s rejection of this claim is improper for the reasons set forth above with respect to claim 7. Motorola in view of Beith fails to show each and every limitation of claim 8. In addition, there is no teaching or motivation to modify any of the

applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 8 be withdrawn.

7. Claim 9 is Separately Patentable

Claims 9 is separately patentable because there is no disclosure that the “*n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance*”. The Examiner erroneously presumes that the Beith reference “must necessarily store the results that are confirmed as not matching the utterance so that each possible recognition candidate is only presented one time to the user,” specifically on page 9 of the Office Action dated October 19, 2006. The Beith reference merely teaches in Figure 7B, step 344 that VR checks to see if all matches have been queried and if all matches have not been queried, the VR will retrieve the next best match. *See* column 10, lines 5-11. Nowhere does the Beith reference teaches or suggests a namespace attribute that stores results from a grammar that are not confirmed as not matching the utterance. In addition, the Beith reference teaches away from the erroneous presumption alleged by the Examiner by sequentially prompting the next best name match therefore the Beith reference does not need to store the result from a grammar that are not confirmed as not matching the utterance. Moreover, the Beith reference does not teach the necessity of storing the results from a grammar that are confirmed as not matching the utterance, it may simply discard the results from a grammar that are confirmed as not matching the utterance. Therefore, the presumption made by the Examiner that the Beith reference must necessarily store the results that are confirmed as not matching the utterance is erroneous and baseless. Accordingly, the rejection of claim 9 is improper for the reasons set forth above and there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 9 be withdrawn.

8. Claim 10 is Separately Patentable

Claim 10 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element comprises an expression attribute that specifies a portion on an input element to be confirmed with the user*. The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 7. Motorola in view of Beith fails to show each and every limitation of claim 10. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 10 be withdrawn.

9. Claim 11 is Separately Patentable

Claim 11 is separately patentable because Motorola in view of Beith fails to disclose *the n-best filter element specifies a loop to go through the list of possible matches for the utterance*. The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 7. Motorola in view of Beith fails to show each and every limitation of claim 11. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 11 be withdrawn.

**E. The Rejection of Claims 6 and 12 Under 35 U.S.C. §103(a) is Improper**

On Page 10 of the Office Action Claims 6 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent

No. 6,449,496 to Beith et al. and in further view of Applicant's Admitted Prior Art. Applicant respectfully traverse this rejection.

The Office Action's modification of Motorola and Beith in view of the other cited references – AAPA – suffers from similar flaws stated above in claim 1. For example, in claims 6 and 12, the Office acknowledges that neither Motorola nor Beith discloses “an error announcement is made when a match is not found.” *See* Office Action on p. 10. The PTO asserts that AAPA remedies this deficiency because it is supposedly “notoriously well known...to provide the user with an announcement that no match has been found, such as “I did not understand” or requesting the user to repeat the utterance”. *See* Office Action at p. 10. However, AAPA does not disclose the recitation as alleged by the Office nor does the AAPA support this conclusion as a whole. Rather, Applicants respectfully submit that the PTO gleaned from Applicant's Detailed Description on page 2, the only section that recites “I did not understand”, to improperly construct the motivation. Thus, absent further evidence, the Office has clearly failed to meet its *prima facie* burden.

For at least the above reasons Appellant respectfully requests that the rejection of Claims 6 and 12 be withdrawn.

**F. The Rejection of Claims 13-17 Under 35 U.S.C. §103(a) is Improper**

On Page 10 of the Office Action Claims 13-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Motorola in view of Beith et al. and in further view of U.S. Patent No. 6,269,336 to Ladd et al. Appellants respectfully traverse this rejection.

Claim 13, recites “at least one dialog element contained within a container element.” The Examiner simply fails to address such recitation in the Office Action. Furthermore, Motorola fails to disclose or suggest at least one dialog element contained within a container element.

Thus, Applicant respectfully request that the rejection of Claim 13 be withdrawn.

The Office continues to misapply its obligation to provide motivation to combine references despite Applicants clearly indicating its deficiencies. Specifically, the Office Action dated October 19, 2006, fails to set forth a proper *prima facie* case of obviousness.

As stated in MPEP § 2143, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Also, as stated in MPEP § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, as stated in MPEP § 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). That is, "[a]ll words in a claim must be considered in

judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970).

The Office Action fails in all of the above rejections to set forth a proper *prima facie* case of obviousness.

First, while the Office recognizes that the Motorola reference does not disclose or suggest an n-best list filter element in an XML-based language structure as recited in the claims, it presumes that Beith remedies this deficiency because it alleges “a method for requesting verification from a list of possible matches for an audibly-uttered user response”. See Office Action at p. 11. However, Applicants respectfully submit that **Beith does not disclose, suggest, or even contemplate “an n-best list filter element”**. The mere disclosure of a method for requesting verification from a list is not the same as an n-best list filter element recited in the claims. Accordingly, Applicants respectfully submit that not all of the claimed limitations are taught in the references.

Second, while the Office also recognizes that the Motorola reference and the Beith reference does not disclose or suggest a XML-based page is executed in a caller server as recited in the claims, it presumes that Ladd reference remedies this deficiency because it alleges “a call server that engages in a user in a dialog based on the content of VoXML voice pages.” See Office Action at p. 12. However, Applicant respectfully submit that Ladd fails to remedy such deficiency. The Ladd reference fails to teach a call server that receives input from a user and prompts the user to verify possible matches for audibly-uttered user responses that are not understood based on the XML-based page contents but rather teaches a communication node respond to the user based on the retrieved information. In addition, Ladd reference fails to teach or suggest the XML-based page contents are executed in the call server, therefore the Ladd

reference fails to remedy the deficiencies of the Motorola reference and the Beith reference.

Third, the PTO asserts that modifying the Motorola reference to include the n-best list filter feature on a call server would have been obvious “because call server enable user to access information from any location in the world using voice inputs.” *See* Office Action at p. 12. However, such a statement represents classic **impermissible hindsight**. The Office Action fails to provide any ***evidence*** as to why one of ordinary skill in the art would choose to implement the n-best list element in the way claimed on a call server. Instead, the Examiner relies on his own hindsight conjecture. Apparently, the Office Action’s statement that it would greatly improve accuracy and increase user confidence in the system is wholly unsupported by Motorola nor Beith. Furthermore, the Office Action’s statement that it would enable user to access information from any location in the world using voice inputs is not contemplated by the Motorola reference nor the Beith reference. Although the Office attempts to use the Balentine reference as a source of motivation to combine Motorola and Beith, the reference was clearly “not relied upon” by the Office. As a result, none of the references specifically cited in the Office’s rejection states anywhere that there is an advantage in adding an element in the XML-based language.

1. Claim 14 is Separately Patentable

Claim 14 is separately patentable because Motorola in view of Beith and in further view of Ladd fails to disclose *the n-best filter element operates to cause processing system to generate a list of possible matches for a received audible utterance*. The Office Action’s rejection of this claim is improper for the reasons set forth above with respect to claim 13. Motorola in view of Beith and in further view of Ladd fails to show each and every limitation of claim 14. In addition, there is no teaching or motivation to modify any of the applied references to include



this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 14 be withdrawn.

2. Claim 15 is Separately Patentable

Claim 15 is separately patentable because there is no disclosure that the “*n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance*”. The Examiner erroneously presumes that the Beith reference “must necessarily store the results that are confirmed as not matching the utterance so that each possible recognition candidate is only presented one time to the user,” specifically on page 9 of the Office Action dated October 19, 2006. The Beith reference merely teaches in Figure 7B, step 344 that VR checks to see if all matches have been queried and if all matches have not been queried, the VR will retrieve the next best match. *See* column 10, lines 5-11. Nowhere does the Beith reference teach or suggest a namespace attribute that stores results from a grammar that are not confirmed as not matching the utterance. In addition, the Beith reference teaches away from the erroneous presumption alleged by the Examiner by sequentially prompting the next best name match therefore the Beith reference does not need to store the result from a grammar that are not confirmed as not matching the utterance. Moreover, the Beith reference does not teach the necessity of storing the results from a grammar that are confirmed as not matching the utterance, it may simply discard the results from a grammar that are confirmed as not matching the utterance. Therefore, the presumption made by the Examiner that the Beith reference must necessarily store the results that are confirmed as not matching the utterance is erroneous and baseless. Accordingly, the rejection of claim 15 is improper for the reasons set forth above and there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 15 be withdrawn.

3. Claim 16 is Separately Patentable

Claim 16 is separately patentable because Motorola in view of Beith and in further view of Ladd fails to disclose *the n-best filter element comprises an expression attribute that specifies a portion on an input element to be confirmed with the user*. The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 13. Motorola in view of Beith and further view of Ladd fails to show each and every limitation of claim 16. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 16 be withdrawn.

4. Claim 17 is Separately Patentable

Claim 17 is separately patentable because Motorola in view of Beith and in further view of Ladd fails to disclose *the n-best filter element specifies a loop to go through the list of possible matches for the utterance*. The Office Action's rejection of this claim is improper for the reasons set forth above with respect to claim 13. Motorola in view of Beith and in further view of Ladd fails to show each and every limitation of claim 17. In addition, there is no teaching or motivation to modify any of the applied references to include this feature.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 17 be withdrawn.

**G. The Rejection of Claim 18 Under 35 U.S.C. §103(a) is Improper**

On Page 14 of the Office Action Claim 18 was rejected under 35 U.S.C. §103(a) as being

unpatentable over Motorola (VoxML 1.1 Language Reference) in view of U.S. Patent No. 6,449,496 to Beith et al. in further view of Ladd and further in view of Applicant's Admitted Prior Art. Applicant respectfully traverse this rejection.

The Office Action's modification of Motorola and Beith and Ladd in view of the other cited references – AAPA – suffers from similar flaws stated above in claim 13. For example, in claim 18, the Office acknowledges that neither Motorola, Beith nor Ladd discloses “an error announcement is made when a match is not found.” *See* Office Action on p. 14. The PTO asserts that AAPA remedies this deficiency because it is supposedly “notoriously well known...to provide the user with an announcement that no match has been found, such as “I did not understand” or requesting the user to repeat the utterance”. *See* Office Action at p. 14. However, AAPA does not disclose the recitation as alleged by the Office nor does the AAPA support this conclusion as a whole. Rather, Applicants respectfully submit that the PTO gleaned from Applicant's Detailed Description on page 2, the only section that recites “I did not understand”, to improperly construct the motivation. Thus, absent further evidence, the Office has clearly failed to meet its *prima facie* burden.

For at least the above reasons Appellant respectfully requests that the rejection of Claim 18 be withdrawn.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Yisun Song', is written over a horizontal line.

Yisun Song  
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For

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## VIII. CLAIMS APPENDIX

1. (Previously Presented) A computer-readable storage medium comprising code programmed in a markup language for facilitating voice-enabled communication between a voice service system and an individual, the markup language comprising:

a hierarchical set of functional elements that define the capabilities of the markup language, the set of elements comprising:

a dialog element that defines a unit of interaction between the voice service system and an individual;

an input element contained in the dialog element and operative to request input from an individual during execution of a voice service; and

an n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response;

whereby one or more of the elements are arranged to define a voice service.

2. (Original) The markup language of claim 1 wherein the n-best list filter element operates to cause a processing system to generate a list of possible matches for a received audible utterance.

3. (Original) The markup language of claim 1, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance.

4. (Original) The markup language of claim 1, wherein the n-best filter element comprises an expression attribute that specifies a portion on an input element to be confirmed with the user.

5. (Original) The markup language of claim 1, wherein the n-best filter element

specifies a loop to go through the list of possible matches for the utterance.

6. (Original) The markup language of claim 5, wherein the n-best filter element specifies an error element to announce when a match is not found.

7. (Previously Presented) An active voice page in a computer-readable storage medium for use in an interactive voice output comprising:

at least one dialog element contained within the container element, the dialog element comprising content for delivery to an identified user during an interactive voice broadcast;

at least one input element contained within the at least one dialog element, the at least one input element defining input to be received from the identified user during the interactive voice broadcast; and

at least one n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response.

8. (Original) The active voice page of claim 7 wherein the n-best list filter element operates to cause a processing system to generate a list of possible matches for a received audible utterance.

9. (Original) The active voice page of claim 7, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance.

10. (Original) The active voice page of claim 7, wherein the n-best filter element comprises an expression attribute that specifies a portion on an input element to be confirmed with the user.

11. (Original) The active voice page of claim 7, wherein the n-best filter element specifies a loop to go through the list of possible matches for the utterance.

12. (Original) The active voice page of claim 11, wherein the n-best filter element specifies an error element to announce when a match is not found.

13. (Previously Presented) An interactive voice output system that dialogs with a user comprising:

a XML-based page comprising:

at least one dialog element contained within a container element, the dialog element comprising content for delivery to an identified user during an interactive voice broadcast;

at least one input element contained within the at least one dialog element, the at least one input element defining input to be received from the identified user during the interactive voice broadcast; and

at least one n-best list filter element operative to request verification from a list of possible matches for an audibly-uttered user response; and

a call server that engages a user in dialog based on the dialog element, receives input from a user and prompts the user to verify possible matches for audibly-uttered user responses that are not understood based on the XML-based page contents.

14. (Original) The interactive voice output system of claim 13 wherein the n-best list filter element operates to cause a processing system to generate a list of possible matches for a received audible utterance.

15. (Original) The interactive voice output system of claim 13, wherein the n-best filter element comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance.

16. (Original) The interactive voice output system of claim 13, wherein the n-best

filter element comprises an expression attribute that specifies a portion on an input element to be confirmed with the user.

17. (Original) The interactive voice output system of claim 13, wherein the n-best filter element specifies a loop to go through the list of possible matches for the utterance.

18. (Original) The interactive voice output system of claim 17, wherein the n-best filter element specifies an error element to announce when a match is not found.



**IX. EVIDENCE APPENDIX**

None.

**X. RELATED PROCEEDINGS APPENDIX**

None.